

MIDDLESEX SAMPLING PLANT,
ADMINISTRATION BUILDING
239 Mountain Avenue
Middlesex
Middlesex County
New Jersey

HAER No. NJ-107-C

HAER
NJ
12-MIDSK,
1C-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Northeast Region
Philadelphia Support Office
U.S. Custom House
200 Chestnut Street
Philadelphia, P.A. 19106

HISTORIC AMERICAN ENGINEERING RECORD

MIDDLESEX SAMPLING PLANT, ADMINISTRATION BUILDING

HAER NO. NJ-107-C

HAER
NJ
12-MIDDLESEX,
IC-

Location: 239 Mountain Avenue
Middlesex, Middlesex County
New Jersey
UTM: Zone 0018, Easting 542994.49963, Northing 4491095.76065
Quad: Plainfield, New Jersey, 1:24,000

Date of Construction: 1949

Engineer/Architect: Unknown

Present Owner: U.S. Department of Energy
Oak Ridge Operations Office
P.O. Box 2001
Oak Ridge, TN 37831-8723

Present Use: Bechtel office

Significance: The administration building was part of the Middlesex Sampling Plant used between 1943-67 for sampling uranium, beryllium, and thorium for the Manhattan Engineer District/Atomic Energy Commission for use in the development of atomic weapons. This work was part of a top-secret nationwide fabricating effort during World War II to develop an atom bomb, and post-war, to create atomic weapons as part of President Harry S. Truman's Cold War policy of military supremacy over the Soviet Union.

Project Information Statement:

The Formerly Utilized Sites Remedial Action Program (FUSRAP) of the U.S. Department of Energy (DOE) will demolish the process building and the boiler house as part of site remediation and decontamination. A Memorandum of Agreement between the DOE-Former Sites Restoration Division (FSRD) and the New Jersey SHPO stipulated HAER documentation to mitigate this adverse effect. This documentation was undertaken to fulfill this stipulation.

Alexandra C. Cole
Formerly Utilized Sites Remedial Action Program
Contract No. DE-AC05-91OR21950
Science Applications International Corporation (SAIC)
816 State Street, Suite 500
Santa Barbara, CA 93101

NARRATIVE DESCRIPTION

The administration building, built in 1949 after the AEC bought the property from the American Marietta Company, replaced an existing frame administration building that was located in roughly the same area as the present building (see Sanborn Map 1927 revised in 1948). Constructed of concrete posts and beams with concrete block walls and a concrete bond beam above the windows, the building is a modest one-story L-shaped facility on a raised concrete foundation. The main block is rectangular, measuring 36 feet by 125 feet, with a wing measuring 22 feet by 51 feet extending to the north. The flat roof consists of concrete panels covered with composition roofing. The parapet walls are capped with a terra cotta coping.

The entrance bay, on the east side, has a double metal door with 9" square windows in the upper sections and two fixed sidelights of three panes each. A wide concrete landing with two steps leads to the doors. The rear entrance on the west side of the main block has a similar metal double door and is reached by a concrete porch with four steps. Two other entrances, located on the west side of the wing and the north side of the main block, have metal single doors with large glass upper panes bisected by single muntins. They are reached by three concrete steps and a concrete ramp.

Multi-paned fixed and transom industrial windows in metal sash are located on the north, south, and east sides, and on the west side of the wing. Paired recessed windows, each with three one-over-one light windows in aluminum sash, are located on the west side of the main block. A double window with two one-over-one light windows in aluminum sash are located on the north side of the main block, as well as two vertical three-pane windows that have been painted over.

The interior is divided into 16 rooms, including offices, a hallway, an entrance vestibule, storage closets, a large shower room, and two restrooms. The concrete block walls have been covered with plywood panelling, and the dropped ceilings have acoustical tile with fluorescent light fixtures inset. Floors are either concrete, with central drains, or covered with asphalt tiles 12" square. The bathrooms and shower room have glazed tile walls. The interior doors are metal, with either two recessed panels or a recessed bottom panel and a clear glass upper pane.

Minor alterations on the exterior include the concrete block infill of a door and window on the north side of the main block and aluminum sash windows at the north and west sides of the main block. On the interior the changes have been more extensive, and occurred probably when the Marine Reserve moved into the buildings in 1969. Such changes include the plywood panelling on the walls, the dropped ceilings, and the fluorescent lights.

DESCRIPTION OF USES IN THE ADMINISTRATION BUILDING

The administration building housed all the offices, health and safety facilities, lunchroom, locker rooms, shower, laundry, waste disposal unit, and restrooms for the sampling operation. The exact location of the rooms is unknown; a contemporary report indicated that the two locker rooms were on either side of the shower room (Cahalane 1958:39). These rooms may be the current storage and lab rooms, for they are large rooms with concrete floors. Mr. Porowski, a guard who worked there from 1946-51 indicated that the room where workers changed their work clothes and had their radiation exposure pens checked

after working in the process building were at the rear of the building (E. Porowski, personal communication May 1996).

According to Porowski, workers came through the main gate onto the property, and entered the administration building's front door to have their passes and IDs checked. They then proceeded to the first locker room, where they changed into work clothes and shoes, before continuing on to the process building. When they finished work for the day, or when they returned to the administration building to eat lunch in the lunch room, they first removed their work clothes in a second locker room, placed them in the laundry room, showered, and changed into their street clothes in the first locker room. Porowski indicated that workers wore "pens" that were checked at the end of each shift. Workers whose radiation dose was too high did not work for several days (E. Porowski, personal communication, May 1996). A 1958 report indicated that workers wore a film badge that was developed weekly in New York City to monitor radiation exposure (Cahalane 1958:38).

Health and safety were of concern because of the radioactivity of the materials being sampled. In the early days at MSP, two factors combined to make the operations more hazardous than they would be later: the crude methods for handling the dust and the workers' lack of understanding of the hazards involved. Increased mechanization of dust collection and disposal, education of the workers, radiation monitoring, the provision of protective clothing and respirators by MSP, and air sampling all contributed to greater health standards over time. After 1951, when United Lead assumed control of the operations, a Health Physicist was on-site maintaining the AEC standards for working with radioactive materials, monitoring working areas and shipments for radiation, and collecting breath and urine samples at periodic intervals. Workers were given a yearly physical examination. The degree of radiation from alpha, beta, and gamma rays was checked daily by dosimeters in working areas (Cahalane 1958: 38-9; E. Porowski, personal communication May 1996).

The AEC left the site in 1967, and from 1969-79 the building was used as administrative offices by the U. S. Marine Corps, Sixth Motor Transport Battalion reserve training center. Currently, the building serves as offices for the Bechtel site supervisor.

Sources of Information:

Interviews

Edward Porowski, telephone interviews May 1996, Santa Barbara, California to Piscataway, New Jersey. Former guard at MSP from 1946-1951.

Gerry Blust, April 1996, Middlesex, New Jersey. Bechtel, Site Manager MSP.

Bibliography

Primary Sources

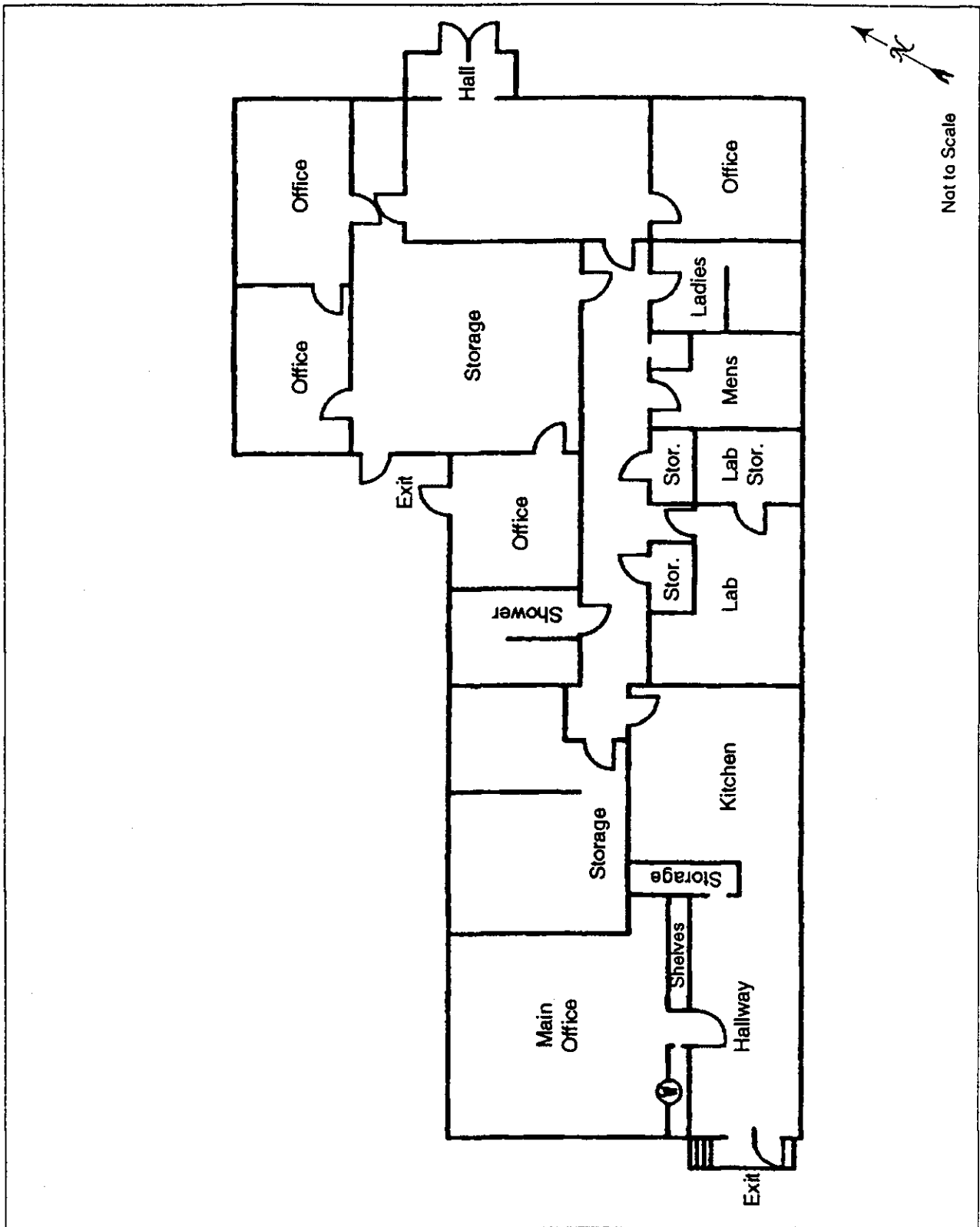
Borough of Middlesex Tax Assessors Records, Block 318, Lot 1A. Located at Middlesex Tax Assessor's Office.

Secondary Sources

Cahalane, R.W. *The History of the Middlesex Sampling Plant*. Cincinnati, Ohio: National Lead Company of Ohio, 1958. NLCO-733 Special. Contract Number AT (30-1)-1156.

Maps

1927 corrected to 1948. "Bound Brook, New Jersey, including South Bound Brook, Somerset County, and Middlesex, Middlesex County, New Jersey." The Sanborn Map Company, New York, New York.



ADMINISTRATION BUILDING FLOOR PLAN. 1996